

#5

PAGE 53/60 • RCV'D AT 10/31/2005 12:02:29 PM [Easiest Standard Time] • SVR:USPTO-FXRF-5/25 • DNI'S:7466630 • CSID:703 308 4221 • DURATION (mm:ss):29:26
MAY - RE

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/529,319

Source: PCT

Date Processed by STIC: 10/31/2005

ENTERED

BEST AVAILABLE COPY



PCT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/529,319

DATE: 10/31/2005
TIME: 11:07:54

Input Set : N:\CRF4\Refhold\10_folder\J529319.raw
Output Set: N:\CRF4\10312005\J529319.raw

1 <110> APPLICANT: DRANCOURT, Michel
2 RAOUlt, Didier
3 <120> TITLE OF INVENTION: Molecular identification of bacteria of genus Streptococcus
4 <130> FILE REFERENCE: 123296
5 <140> CURRENT APPLICATION NUMBER: US/10/529,319
6 <141> CURRENT FILING DATE: 2005-03-25
7 <150> PRIOR APPLICATION NUMBER: FR 02/13792
8 <151> PRIOR FILING DATE: 2002-11-05
9 <160> NUMBER OF SEQ ID NOS: 52
10 <170> SOFTWARE: PatentIn version 3.1
12 <210> SEQ ID NO: 1
13 <211> LENGTH: 4523
14 <212> TYPE: DNA
15 <213> ORGANISM: Streptococcus anginosus
16 <220> FEATURE:
17 <221> NAME/KEY: misc_feature
18 <222> LOCATION: (266)..(2087)
19 <223> OTHER INFORMATION: n represents a, t, c, g or i
20 <220> FEATURE:
21 <221> NAME/KEY: misc_feature
22 <222> LOCATION: (266)..(4430)
23 <223> OTHER INFORMATION: n represents a, t, c, g or i
24 <220> FEATURE:
25 <221> NAME/KEY: misc_feature
26 <222> LOCATION: (4430)..(4503)
27 <223> OTHER INFORMATION: n represents a, t, c, g or i
28 <400> SEQUENCE: 1
29 tcatactttt agagttagat tttagctgctc ttttttgcc ttgtttggga ttgtttgtcg 60
30 ttgtcatcaa aattaaagat tctgaaaatt actcaaaaag gataaatgaa aattgtctact 120
31 ctattccatt aatagagaat gtatgaaagaa gaaggagtaa aaaacttggc aggacatgaa 180
32 gttcaatacg ggaaaacaccg tactcgctg agttttcaa gaatcaagga agttcttgat 240
33 ttaccaaatt tgattgaaat ccaganggtat tggttcaaag attttttga ccatggtttg 300
34 aaagaagtat ttgaagatgt acttccatc tcaaacttta cagatacaat ggagctagag 360
35 tttgttgtt atgaaattaa aggatctaaa tacactttag aagaaggacg tatccatgat 420
36 gccagctatt ctgcacccat ttttgtact ttccgttga ttaataaaaga aactggtgaa 480
37 atcaaaaaccc aagaagtgtt ctttggcgat ttcccaatca tgacagaaaat gggaaaccttc 540
38 attatcaatg gtggtagcg gattatcgta ttcagctcg ttctgttctcc aggtgtttac 600
39 ttcaacgata aagtaracaa aaatgtaaa gttgggtatg gttcaactgy cattccctaac 660
40 cgtggagctt ggttagagct ggaaaacagac tcaaaagata tttgttatac tcggattgac 720
41 cgtactcgta agattccgtt taacgacactt ttccgttgcg ttggtttttc tggcgatgat 780
42 gaaatcttg acatttcgg cgacagcgat ttcgttcgca acacgattga aaaggatatt 840
43 cataaaaatc caatggattc acgtacggat gaagcgctta aagaaatcta tgaacgtctt 900
44 cgtccaggtg agcctaaaac agctgatagt tcacgtatgc tattggctgc tcgtttttt 960

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/529,319

DATE: 10/31/2005

TIME: 11:07:54

Input Set : N:\CrE4\Refhold\10_folder\J529319.raw
Output Set: N:\CRE4\10312005\J529319.raw

45 gatccacatc gttacgact ggccggcagtt ggtcggtata aatcaataa aaatattaaac
 46 attaaaacac gtttgttaaa tcacaaacgatt gcagagccctt tggtagatcc agaaaacaggt 1020
 47 gaaatcttgg ttgaagctgg aacgggttatg acgcgttagt tcattgatag cattcagaa 1080
 48 tacttggacg gtgatttgaa taaaatcact tatattccaa atgatgcagc tggtaaca 1140
 49 gagccagggt ttcttcaaaa attcaaaagtg gtggcgccaa ctgatccaga tcgtgtggg 1200
 50 actattattt gtaatgccc cccaggagat cgagttcata cgattacgccc agcagatatt 1260
 51 ttggctgaga tgaattactt cttgaacccctc gctgaaggac ttggctgtgt ggacgatatt 1320
 52 gaccacttgg gaaatctgg gattcgtgcc gttggtaaat tgcttgcata ccaagtgacgt 1380
 53 ctggctgtgt ctgcgtatgg gcaaaaagtt cgggagcgcg tgagtgtgca agataatgaa 1440
 54 gtgttgacac cgcaacaaat cattaaacatc cggccagtc cagcagctat caaagaattc 1500
 55 tttggttcat ctcattgtc tcaattttatg gaccaacata atccactgtc tgarttgctc 1560
 56 cacaacgyc gtttgcgcg cttggacatc gttggtttga ctgcgtgacg tgctggat 1620
 57 gaargtgctg gacgtgcaact acacncaacta tggcgtatg tgcctgatgg 1680
 W--> 58 vggaccaaac atcggtttga tcaayaactt gtcttcttat ggtcaatttga ataaatatgg 1740
 59 ctttatccaa acggcgatc gtaaagtgra tgcgtaaaca ggtctggtca chaatgaaat 1800
 W--> 60 cgtttgggtt acagcggang aagaagatgaa attattgtt gecgaagcaa attctaaatt 1860
 61 aacagaagat ggtcgttttg cagaagcgtatc tgcattggg 1920
 62 agaatttctt tcagatcarg tgcatttcat ggatgtgtcg cctaagcagg tagttccgt 1980
 W--> 63 tgcgcacagca tgcgttccnk ttcctytgaaa aygnacgact caarcnctgn ttcattgggt 2040
 W--> 64 gccaacatgc aacgtcaago agtacecggtt attgatccgc atgcaccata ygywggtna 2100
 W--> 65 tggatgaa taccacgacg antisayamt ctggtgoggc tgattantgc mcaacacgac 2160
 66 gttaaagggt tmttattygt tgcgcacaaa gttgaagttc gtcgtgaaga tggtctactt 2220
 W--> 67 gtagtntat catagntgac gaaatttccgc cgtnnaact gttgtactg tgcgttac 2280
 W--> 68 acaacgtacg ggatggtaaa agatttgcgaa tacagntgta aaaagggttga stttatcgca 2340
 69 gacggacctt ctatggaaaa aggtgaaatg gcrcttggac aaaayccaaat cgtgcitiat 2400
 70 atgacatggg aaggttacaa ctttgaagat gccgttatca tgagtgagcg httagtgaaa 2460
 71 gacgatgtt acacatctgt tcaatttggag gaatttcaat cagaaacacg tgatcwaag 2520
 W--> 72 cttaggmct gaagaatca ckcccgaaat tccaaacgty ggtgaagatg ccnntygas 2580
 73 gaccttggac gaaaygggra ttatccogya ttgtgtcyga rgtaaagag ggcgacattc 2640
 74 ttgttggtaa agtcacacca aaaggtgaaa aagatcttc tgctgaagag cgtotcttgc 2700
 75 acgcaatctt cggtgacaaag tcaatgttacg ytcycttctgt gtaccwcayg 2760
 76 gtgsygcgtg gkgyygtcgt tcaatcgatgtt gttttccgcg tgatgttactt 2820
 W--> 77 caatcwggtg tcaatcgatgtt tyggrgataa gatggcyggw ggttgcgtt wcaatcgat 2880
 78 ttgaggatata gccgtatctt ggttgcgtt cggccatcgka araycamgtg 2940
 79 ggggtccatc tgcgtatgaa tggatgttactt tgcgttccgcg attgttcccg 3000
 80 gcaaccttgg cattcacatt ccagatgaa caccagttga tattatgttgc aaccacttgc 3060
 81 gggaaacgct tgcgtaaatc gcaacaccag tatttgcgtt tcacctcggt atgctgtc 3120
 82 gtaacttggta gccatttgcg ggcgttccgcg ggctagctca gatgatctt 3180
 83 accatatggt tgcgtataag aatcgatgtt cgggttggat tattatgttgc aaccacttgc 3240
 84 aacaacccctc tgggtggaaa agacatcgat tgcgttccgcg gcaatcctt tattatgttgc 3300
 85 gggcttcttgc agccatcggt tgcgttccgcg ggcgttccgcg gacaatcctt tattatgttgc 3360
 86 atgacatcaa tggctgttgc gcaacaccag tatttgcgtt tcacctcggt atgctgtc 3420
 87 aaccagggtt tccatcgat tgcgttccgcg ggcgttccgcg gcaatcctt tattatgttgc 3480
 88 acatgcgtgt ctttgcgttgc gcaacaccag tatttgcgtt tcacctcggt atgctgtc 3540
 89 tggatgtatgc tgcgttccgcg gcaacaccag tatttgcgtt tcacctcggt atgctgtc 3600
 90 aagcaaaagc cgcttttgcg gcaacaccag tatttgcgtt tcacctcggt atgctgtc 3660
 91 agaaaggtaa gaaatagtgg tgcgttccgcg gcaacaccag tatttgcgtt tcacctcggt 3720
 92 ttcttcctgtt aaagtccgtt tgcgttccgcg gcaacaccag tatttgcgtt tcacctcggt 3780
 93 ttcttcctgtt aaagtccgtt tgcgttccgcg gcaacaccag tatttgcgtt tcacctcggt 3840

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/529,319

DATE: 10/31/2005

TIME: 11:07:54

Input Set : N:\CrE4\Refhold\10_folder\J529319.raw
Output Set: N:\CR-E4\10312005\J529319.raw

RAW SEQUENCE LISTING : DATE: 10/31/2005
PATENT APPLICATION: US/10/529,319 : TIME: 11:07:54

Input Set : N:\CrE4\Refhold\10_folder\J529319.raw
Output Set: N:\CrE4\10312005\J529319.raw

144	aataatggttt	catccaaaaca	ccatatatcgta	aagttgaccgg	cgctacaggt	gtgattacaa	2040
145	acgaaaatcg	ttgggttgact	gcgcgatgaag	aagatgaata	cacagtagca	caggctaact	2100
146	caaaaactaa	cgaagatgga	adatttgcgt	aagacatcg	tatgggacgt	ccaaggta	2160
147	ataaccaaga	gttcccagca	agcgttgtt	acttcgtaga	cgtttcacot	aaacaagtag	2220
148	ttggccgttgc	gacagcatgt	attcccttcc	ttgaaaacga	tgactctaaac	cgtgcctta	2280
149	tgggtgccaa	catgcaacgt	caagcggtgc	cattgattga	tccacacgca	ccatatgttg	2340
150	gtactggtat	ggaatataca	gdagcccaacg	actcagggtgc	tgcagttatc	gctaaacacg	2400
151	atggacgcgt	tatcttct	gatgtgtaaa	aagttaaga	tgcgceaa	gatggttcac	2460
152	ttgtatgttta	ccacattact	aaatccgc	gttcaactc	aggtagact	tataaccaac	2520
153	atacacttgt	taaagtggc	gatatcgtt	aaaaaggta	cttcatcgct	gatggtcctt	2580
154	caatggaaaa	aggtgaaatg	gccttggtc	aaaaccaat	cgtcgcttac	atgacktggg	2640
155	aagggtacaa	cttcgaggat	goggttatca	tgtctgaacg	ccttgtgaaa	gatgatgtct	2700
156	atacatctgt	tcacttggaa	gaatacgaat	cagaaacacg	tgataactaag	ttaggccctg	2760
157	aagaaaatcac	tcgcgaaatt	ccaaacgttg	gtgaagatgc	ccttcgcaac	ttggacgaaa	2820
158	tggggattat	ccgtatttgt	gcgcgaaat	aagaggcg	cattttgtt	ggtaaagtca	2880
159	cacccaaaagg	tgaaaaagat	cattctgtc	aagagcgtct	cttcacgc	atcttcggtg	2940
160	acaagtcacg	tgaagatcg	gatcaccttc	ttcggttacc	tcacgggtcc	gatgggtcg	3000
161	ttcgtgtatgt	gaaaatcttt	acccgtgc	acggtgatga	attgcaatca	gggtttaaca	3060
162	tggttggttcg	tggttccat	ccgtcaaaaa	cgtaaagatca	aggctggaga	taagatggcc	3120
163	ggtcgtccac	ggtaacaagg	gtgtcggtt	acgtaywta	cctgttgagg	atatgcctata	3180
164	tcttccagat	ggaacacccag	ytgacawcat	gttgaaccca	ctssgggtgc	catcwcgtat	3240
165	gaacatcgga	caagttatgg	agtttccac	tggtagtgc	gctctgtat	ttgttattca	3300
166	cattgcaaca	ccagtcttt	atggggcaac	ttctgaagac	cittggata	cagttaacga	3360
167	agctggatcg	gctagcgac	ctaaagacagt	tctttacat	ggacgtactg	gtgaaccatt	3420
168	tgataaccgt	gtgtcagg	gtgtcatgt	catgattaaa	cttcaccaca	ttgtttagtga	3480
169	taaacttcac	gcacgttc	ttggtcctt	ctcaacttgt	acgcaacaac	ctcttggtgg	3540
170	taaagcacaa	tttggtgac	aatgtttcg	tgaaatggaa	gttgggctt	ttggaaagctt	3600
171	cgggtgcac	aatgttctt	aagaaaatctt	gacttacaaa	tcagatgtat	tcaacggctg	3660
172	tcttaaagct	tatgaagcca	tcactaaagg	taaaccaatt	ccaaaaccag	gtgttccaga	3720
173	atcattccga	gttcttgc	aagaattgtca	atcaacttgt	cttgacatgc	gctgtgttgc	3780
174	tgaagatgc	aatgaatgt	aaatctgt	tcttgcata	ggtaagatgc	acgatgttat	3840
175	gcacgttgat	gatcttgat	aaatctgtca	aaaacaaagaa	gcagaagaag	cggaaaaaaac	3900
176	agaagtttct	gcagaagaaaa	aaataataata	ggaaagaaca	ttcagacatg	agagaggccaa	3960
177	gacctgcttc	tcttggtc	atgtttgtat	ttagtccat	aacgataaat	gatgtcttac	4020
178	gaatcatgaa	tttgcgtat	atgcacagt	gaaagtgc	cagttat	aaagtcaataa	4080
179	gaaggtatca	ttggtgacgt	atgcacagt	ccggcg	tc		4118
181	<210>	SEQ ID NO:	3				
182	<211>	LENGTH:	3425				
183	<212>	TYPE:	DNA				
184	<213>	ORGANISM:	Abiotrophia defectiva				
185	<400>	SEQUENCE:	3				
186	atatagggc	cgcgtgg	acggccccgg	ctggtcctt	acaacatgt	acgtcaactcc	60
187	gatgggttgg	ttctgttgc	tttttttgc	gttcaaaaga	ccggaaaaatg	tcattttgtca	120
188	aaatttata	aaattatgtt	ccatataatgt	aagtgggtt	cttagattat	attatagggg	180
189	tgaatcgctt	gagtcatatc	gttataatgt	gtaaaaaaac	tgagcgtcg	agctatgcgc	240
190	gtatcgacga	agtcttagag	ttcccgaaact	tgtattgtaa	ccaaacggat	tccttacaaat	300
191	ggttcttgg	tgaagggtca	aaatgtatgt	tcgaggacat	ttcgccgatt	gtcgaccat	360
192	cgggagaactt	ggaacttcat	ttgttagact	atgatgttca	ggaagctaa	tatagcttag	420
193	aagaagctcg	tagccatgac	gcbaactact	aaaaaccaat	ctatgttacc	ttggccctgt	480

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/529,319DATE: 10/31/2005
TIME: 11:07:54Input Set : N:\CRF4\Refhold\10_folder\J529319.raw
Output Set: N:\CRF4\10312005\J529319.raw

194	tcaacaaaaga gacaggtgaa	gtcaaaaagaac aagaagtctt	cttcggggac ttcccaatca	540
195	tgaccgaat ggggacattc	attatcaacg gggcggaaacg	ggttatcggtt tcccagttgg	600
196	taotgtctcc aggtgtctac	ttccacgacc gtagggacaa	gaaaggccgc cacagotata	660
197	tttctacgtt tattcttaac	cgtggggctt ggttgaatt	tgaatcagat gctaaggggaa	720
198	ttgcotacgt ccgcattgac	ccgacccgga agatccatt	gactgtctt atgcgtgcct	780
199	taggttttgg ttcagatgac	gagatttatg atatcttcgg	ccaatctgag ctcttagact	840
200	taactatcga gaaggatgtt	ccaaaaaaca ttcaagactc	tcgtacggaa gaaggcttga	900
201	aggacattt cgagcgtctc	cgtccaggtg aacctaagac	cgccagaaaacg tcacgtaacc	960
202	tcttgggttgc ggcgttctt	gacccacgtc gctatgactt	agcacctgtt ggtcggttata	1020
203	agatcaataa aaagctccac	ttcaagaacc gtttgggtgg	cttgcactt gctgaaaacct	1080
204	tggtaaacc agaaaacagge	ggagtgtctt ttgaagaaagg	aacggcttgc gatcaagaac	1140
205	gtgttcaagc cctgatcca	tacttagagg ctgggttggaa	taaggttacc ctctatccct	1200
206	ctgaagatag tggtagct	ccaccaattt atttacaat	catcaaagg tattcaccta	1260
207	agaacgcccga gcaagtgatt	aaatcatcg gtaacggaa	cattgagaag attaagtgtt	1320
208	tgacgcccage tgacattatt	gggtcaatga actactatct	ctatttagac caaggaaattt	1380
209	gtgtgacaga tggatcgtac	cacttggcta acggcgttat	tcgttcagtc ggtgaattat	1440
210	tgcaaaacca attcogtac	ggctatccc ggttggaaacg	ggtagtgcgtt gaacgtatgt	1500
211	cgctccaaga tggcgacc	atcacaccgc aacaattgtt	taacattcgtt ccagtagtgg	1560
212	cggttattaa ggaatttttc	gggtcatccc agttgtcaca	attcatggac caagtttacc	1620
213	cactcgggga attgacccac	aaacgtcgtc tggcagcctt	aggggcttgc ggttgacgc	1680
214	gggaccgtgc cggctatgaa	gtgcggggaaat ttcactactc	tcactacgcg cgtatgtgtc	1740
215	caatcgagac gccagaagg	ccaaacatcg ggttgcattaa	cagcttgc tcttgcacca	1800
216	agatcaacaa gtatggttt	atggagacgc ttaccgtaa	agtggacaaa tcgggtacgc	1860
217	cacaccgtgt cagcggaa	atggactacc tagcagcgg	cgaggaagac ttgtacgtag	1920
218	tagcccaagg caactctaaa	ttcaacgaag acgggacctt	cgccaaatgac cttagttatgg	1980
219	cgcggttccg ttcacaaaac	atggaggtaa acgttgcacca	agttagactac atggacgtat	2040
220	cgccaaaacca ggttgcgt	gtggcgactg cttagattcc	gttcttggaa aacgacgact	2100
221	ccaaacggggg cttgttgggt	ggcaacatgc aacgtcaagc	tgtgccaccc attaatccac	2160
222	aatccccact gattggact	gggtatggaaat ataaggcagc	acacgactct ggggtgcgc	2220
223	tcttatgtaa gcgcggcggt	ggagtgggtt atgtcgatgc	taacaagggtt cgctgcgc	2280
224	ctccagaagg tgaagttgac	gaataccgtt taaccaagg	tgcacgtt aacgtggaa	2340
225	cctgttacaa ccaacgtcca	atgttagaaat taggcgacca	agttgtatgcc ttggaaatct	2400
226	tagcagatgg tccatctatg	ccaaatgggg agatggccgt	cggttacaaac ccactgttag	2460
227	ccttcatgac ttggaaagg	ttaactatg aggacgcgg	tatcatgtt gaacgtctgg	2520
228	tcaaaagacga tggtttattac	ttatccaca ttgaagata	tgaatcagag tcccgtgaya	2580
229	cyaaagttagg ccctgaagaa	attacacgcg aaattccaaa	cgtgtccgaa gatgccctca	2640
230	agtacttaga caaaagacggg	atgtatctgtt tagggcgg	agtaaaaagac ggcgatatact	2700
231	tagttgtaa ggtaaacacca	aaagggtgttgc	tcgggaaagaa cgctgtctcc	2760
232	atgtctatctt cggtgagaag	ggcgtgttgcg	ttccttgcgt gtgcacacgc	2820
233	gcggggggcggtt gattgtccac	gggtttaaaa tctttacccg	cgaagctgc gacgaaattgg	2880
234	caccagggtgt caacaagcta	gtccgtctt acatcgata	aaaacgtaaa atcaatgaag	2940
235	gggataagat ggccgttgt	caaggtaaca aagggttgtt	ctcccttatac atgcggaaag	3000
236	aagatatgcc attcttacca	gggttaccc cagttgtat	catgttgaac ccattagggg	3060
237	ttccatcccg tatgaacatc	ggccaaatcc taggttaca	cttggggatg gctgtcg	3120
238	aaatggccat caagatttgc	acacgtgtt ttgacgggtc	tagtgaagaa gatgtctgg	3180
239	aaacagttaa ggaagccggtt	tttgcgtgtt acgtcaagac	atcttataat gatggtcgaa	3240
240	ccgggttaccg atttgaccgt	aaagtctctt ttgggggtat	gtacatgattt aagtggccc	3300
241	acatggtcga tgacaagttt	caacagggtt caacagggtt	atactctctt gttacccaac	3360
242	aaccatttggg tggtaaagct	caatttgggtt ggcaacgttt	cggggagatg gaggttggg	3420

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/529,319

DATE: 10/31/2005
TIME: 11:07:55

Input Set : N:\CRF4\Refhold\10_folder\J529319.raw
Output Set: N:\CRF4\10312005\J529319.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 266,1705,1735,1786,1879,2055,2059,2074,2087,2090,2159,2182
Seq#:1; N Pos. 2207,2287,2296,2315,2376,2633,2915,4132,4143,4184,4187,4207
Seq#:1; N Pos. 4223,4264,4277,4335,4336,4344,4351,4422,4430,4432,4433,4447
Seq#:1; N Pos. 4500,4501,4503
Seq#:4; N Pos. 619,662,788,789,1091,3101,3173,3193
Seq#:6; N Pos. 6
Seq#:7; N Pos. 3
Seq#:40; N Pos. 8
Seq#:42; N Pos. 3
Seq#:43; N Pos. 3
Seq#:52; N Pos. 15

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 3

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/529,319

DATE: 10/31/2005
TIME: 11:07:55

Input Set : N:\CRF4\Refhold\10_folder\J529319.raw
Output Set: N:\CRF4\10312005\J529319.raw

L:33 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:240
L:57 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1680
L:58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1740
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1860
L:63 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2040
L:64 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2100
L:65 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2160
L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2280
L:68 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2340
L:72 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2580
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:2880
L:97 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4080
L:98 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4140
L:99 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4200
L:100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4260
L:101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4320
L:102 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4380
L:103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4440
L:104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:4500
L:264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:600
L:265 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:660
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:780
L:272 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:1080
L:305 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:3060
L:306 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:3120
L:307 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:3180
L:376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:391 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:952 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:40 after pos.:0
L:970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:0
L:981 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:0
L:1048 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:0

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

BLACK BORDERS

IMAGE CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT OR DRAWING

BLURRED OR ILLEGIBLE TEXT OR DRAWING

SKEWED/SLANTED IMAGES

COLOR OR BLACK AND WHITE PHOTOGRAPHS

GRAY SCALE DOCUMENTS

LINES OR MARKS ON ORIGINAL DOCUMENT

REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY

OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.